

We Claim:

1-12. Canceled

13. A process for analyzing gene function comprising: a) injecting a naked polynucleotide encoding the gene into a blood vessel lumen, *in vivo* ; b) increasing the propensity for macromolecules to move through vessel walls and enter the extravascular space; and, c) delivering the naked polynucleotide to an extravascular cell outside of the blood vessel.
14. The process of claim 1 wherein the polynucleotide consists of a gene.
15. The process of claim 1 wherein the gene encodes a protein.
16. A process for analyzing gene function comprising: a) injecting a naked oligonucleotide into a blood vessel lumen, *in vivo* ; b) increasing the propensity for macromolecules to move through vessel walls and enter the extravascular space; and, c) delivering the naked oligonucleotide to an extravascular cell outside of the blood vessel via the increased permeability.
17. The process of claim 4 wherein the oligonucleotide consists of a single strand oligonucleotide.
18. The process of claim 5 wherein the single strand oligonucleotide consists of anti-sense oligonucleotide.
19. The process of claim 6 wherein the single strand oligonucleotide consists of an artificial oligonucleotide.
20. The process of claim 4 wherein the oligonucleotide consists of double strand nucleic acid.
21. The process of claim 8 wherein the double strand oligonucleotide comprises RNA.
22. The process of claim 4 wherein delivery of the oligonucleotide to the cell results in decreased expression of the gene.
23. The process of claim 9 wherein the double strand oligonucleotide consists of a nucleic acid sequence comprising 10 to 50 bases.
24. The process of claim 11 wherein the double strand oligonucleotide consists of a nucleic acid sequence comprising 18 to 25 bases.
25. The process of claim 4 wherein the oligonucleotide comprises sequence that is similar to a portion of the gene sequence.
26. The process of claim 10 wherein the gene is an endogenous gene.

[REPLACEMENT SHEET]

27. The process of claim 15 wherein the gene is a viral gene.
28. The process of claim 1 wherein analyzing gene function comprises drug design.
29. The process of claim 4 wherein analyzing gene function comprises drug design.